

IN THE CLAIMS

1. Device comprising:

- 5           a receiver comprising at least a first  
receiving chain for receiving and processing radio  
frequency signals in a first frequency band and a  
second receiving chain for receiving and  
processing radio frequency signals in a second  
10       frequency band;  
          at least a first antenna which is connected to  
said first receiving chain and in addition via a  
switching component to said second receiving  
chain;  
15           a tuning component for shifting a frequency  
response of said first antenna from said first  
frequency band to a second frequency band; and  
          a controlling portion causing said tuning  
component to shift said frequency response of said  
20       first antenna from said first frequency band to  
said second frequency band and causing said  
switching component to connect said first antenna  
to said second receiving chain, in case a wideband  
noise is expected in said first frequency band.

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2. Device according to claim 1, further comprising a  
communication system transmitter for transmitting  
signals via a radio interface, wherein a transmission  
of signals by said communication system transmitter  
causes wideband noise in said first frequency band,  
30       and wherein wideband noise in said first frequency  
band is expected by said controlling portion whenever

said communication system transmitter is transmitting signals causing wideband noise in said first frequency band.

- 5    3. Device according to claim 1, further comprising a second antenna, which second antenna has a frequency response at said second frequency band and which second antenna is equally connected via said switching component to said second receiving chain,  
10    wherein said controlling portion causes said switching component to disconnect said second antenna from said second receiving chain, in case a wideband noise is expected in said first frequency band.
- 15    4. Device according to claim 3, wherein said controlling portion causes said switching component to connect said first antenna to said second receiving chain and to disconnect said second antenna from said second receiving chain, in case a wideband noise is expected  
20    in said second frequency band.
- 25    5. Device according to claim 4, further comprising a communication system transmitter for transmitting signals via a radio interface, wherein a transmission  
30    of signals by said communication system transmitter causes wideband noise in said second frequency band, and wherein wideband noise in said second frequency band is expected by said controlling portion whenever said communication system transmitter is transmitting signals causing wideband noise in said second frequency band.

6. Device according to claim 1, wherein said receiver is a Global Positioning System receiver for receiving and processing Global Positioning System signals transmitted by Global Positioning System satellites.
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7. Device according to claim 6, wherein said first frequency band is a Global Positioning System L1 band and wherein said second frequency band is one of a Global Positioning System L2 band and a Global
- 10 Positioning System L5 band.
8. Method for improving the performance of a receiver, which receiver comprises at least a first receiving chain for receiving and processing radio frequency
- 15 signals in a first frequency band and a second receiving chain for receiving and processing radio frequency signals in a second frequency band, wherein at least a first antenna is connected to said first receiving chain and in addition via a switching
- 20 component to said second receiving chain, said method comprising:
- determining whether a wideband noise is expected in said first frequency band; and
- shifting a frequency response of said first
- 25 antenna from said first frequency band to a second frequency band and causing said switching component to connect said first antenna to said second receiving chain, in case a wideband noise is determined to be expected in said first
- 30 frequency band.

9. Method according to claim 8, wherein said receiver is comprised in a single device with a communication system transmitter, a transmission of signals by said communication system transmitter causing wideband noise in said first frequency band, and wherein determining whether a wideband noise is expected in said first frequency band comprises detecting whether said communication system transmitter is transmitting signals via a radio interface.
10. Method according to claim 8, wherein a second antenna is connected to said receiver, which second antenna has a frequency response at said second frequency band, said method further comprising preventing a processing of radio frequency signals received via said second antenna, in case a wideband noise is determined to be expected in said first frequency band.
11. Method according to claim 10, further comprising:
- determining whether a wideband noise is expected in said second frequency band;
  - enabling radio frequency signals in said second frequency band received via said first antenna to be processed by said receiver, in case a wideband noise is determined to be expected in said second frequency band; and
  - preventing a processing of radio frequency signals received via said second antenna by said receiver, in case a wideband noise is determined to be expected in said second frequency band.

12. Method according to claim 11, wherein said receiver is comprised in a single device with a communication system transmitter, wherein a transmission of signals by said communication system transmitter causes  
5 wideband noise in said second frequency band, and wherein determining whether a wideband noise is expected in said second frequency band comprises detecting whether said communication system transmitter is transmitting signals via a radio  
10 interface.
13. Method according to claim 8, wherein said receiver is a Global Positioning System receiver for receiving and processing Global Positioning System signals  
15 transmitted by Global Positioning System satellites.
14. Method according to claim 13, wherein said first frequency band is a Global Positioning System L1 band and wherein said second frequency band is one of a  
20 Global Positioning System L2 band and a Global Positioning System L5 band.
15. Mobile telephone with global positioning system (GPS) receiver capability, comprising:  
25 a receiver having an antenna for receiving and a processor for processing GPS signals received at least in a first frequency band;  
a tuning component responsive to a control signal for shifting a frequency response of said antenna  
30 from said first frequency band to a second frequency band; and

a control responsive to operation of said telephone acting as a radio transmitter for providing said control signal.

- 5 16. Apparatus for improving the performance of a receiver, which receiver comprises at least a first receiving chain for receiving and processing radio frequency signals in a first frequency band and a  
10 second receiving chain for receiving and processing radio frequency signals in a second frequency band, wherein at least a first antenna is connected to said first receiving chain and in addition via a switching component to said second receiving chain, said apparatus comprising:
- 15 means for determining whether a wideband noise is expected in said first frequency band; and  
means for shifting a frequency response of said first antenna from said first frequency band to a second frequency band and causing said switching  
20 component to connect said first antenna to said second receiving chain, in case a wideband noise is determined to be expected in said first frequency band.